SRETENSKIY, L.N.

Computation of the tangential forces of wave resistance of a sphere
moving along a circular path. Trudy MGI 11:3-17 '57. (MIRA 11:3)
(Fluid mechanics) (Waves)

40-4-24/24

AUTHOR: SRETENSKIY, L.N.

TITLE: Remarks on the Article:"On the Directed Wave Emission out of
              a Domain Which is Subject to   External Pressure".
              (Zamechaniya k stat'ye L.N.Sretenskogo:"O napravlennom izluche-
              nii voln iz oblasti, podverzhennoy vneshnemu davleniyu".)

PERIODICAL: Prikladnaya Mat.i Mekh., 1957, Vol.21, Nr 4, pp. 595-596 (USSR)

ABSTRACT: The author gives a correction of the errors of calculation
              of his paper mentioned above (see Priklad.Mat.i Mekh.20,3,
              1956). The final result of the paper (the emission is direct-
              ed) is maintained.

AVAILABLE: Library of Congress

CARD 1/1

STRETENSKIY, L. N.

The Dyanmics of Solids in the Works of Euler. In the book: Leonard Eyler Sb. statey v chest' 250-letiya so dnya rozhdeniya, predstavlennykh Akademii nauk SSSR (Leonard Euler, Collection of Articles in Honor of the 250th Anniversary of his Birth, Presented by the Academy of Sciences USSR), Moscow, Publishing House of the Academy of Sciences USSR, 1958, pp. 210-230, Figs. 1 inset portrait. Summary in German.

STRETENSKIY, L. N.

Unpublished Manuscropts of A. N. Lyapunov. In the book: Trudy Tret'ego
Vsesoynznogo matematisheskogo s'ezda. Moskva, Iyun' iyul' 1956 (Third All-
Union Mathematical Conference. Moscow, June-July 1956), Vol. 3,
Obzornye doklady (Survey Reports), Moscow, Publishihg House of the Academy of
Sciences USSR, 1958, pp. 490-500.

16(1)
AUTHORS: Skorry, I.A., University Lecturer, and   SOV/55-58-2-33/35
Kopylov, V.D., Scientific Assistant

TITLE: Lomonosov - Lectures 1957 at the Mechanical Mathematical
Faculty of Moscow State University (Lomonosovskiye
chteniya 1957 goda na mekhaniko-matematicheskom fakul'tete
MGU)

PERIODICAL: Vestnik Moskovskogo Universiteta. Seriya matematiki, mekhaniki,
astronomii, fiziki, khimii, 1958   Nr 4, pp 241-246 (USSR)

ABSTRACT: The Lomonosov lectures 1957 took place from October 17 -
October 31, 1957 and were dedicated   the 40-th anniversary
of the October revolution.
In the general meeting A.N. Kolmogorov, Academician spoke
"On Approximative Representation of Functions of Several
Variables by Superposition of Functions with Less Variables
and ϵ-Entropy of Classes of Functions". The lecture generalizes
the results of Kolmogorov, A.G. Vitushkin, V.I. Arnol'd and
V.M. Tikhomirov. The contents has been already published
(Doklady Akademii nauk SSSR, 114,5), Professor Kh.A.Rakhmatulin,
Member of the Academy of Sciences of the US SSR, spoke on
"Investigation of the Boundary Layer of the Motion of a two-
Component Liquid".
The other lectures were   given   separately in the sections
mechanics and mathematics. The following lectures were given:
1. Professor L.N. Sretenskiy, Corresponding Member, AS USSR :
Propagation of Sound Waves from a Rotating Deformed Ball.
2. Professor G.G. Cherryy: The Flow Around Thin Truncated
Bodies by Gas with High Supersonic Velocity.
3. Professor S.G. Nikiforov : Properties of the Calculation,
Construction and Structure of Hydrotechnical Dikes on the
Rivers of the Central Strip of the USSR.
4. Professor A.Ya. Sagomonyan : Penetration of a Rigid Body
into the Ground.
5. K.I. Litvinov-Sedov, Senior Scientific Assistant : On the
Synthesis of Control Circuits with Bounded Interval of
Variation of the Controlled Variable.
6. V.A. Lozakin, Candidate of Physical-Mathematical Sciences :
Scalar Plastic Metal Properties Under Variations of
Structure
7. Professor E.A. Sleskin : On Some Questions of the Flow
Around Porous Walls.

Card 2/5

AUTHORS: Sretenskiy, L. N., Corresponding Member AN USSR,   30-1-16/39
            Voyt, S. S.

TITLE: The Study of the Motion of Ships and the Work Carried Out in
            Test Basins (Izucheniye dvisheniya korablya i rabota ispytatel'
            nykh basseynov). Conferences in Netherlands and Spain (Konferentsii
            v Gollandii i Ispanii).

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 91-93 (USSR)

ABSTRACT: The Conference in Holland (Vageningen) took place from Sep-
            tember 7 to September 10, 1957, and it was attended by re-
            presentatives from 15 countries, among them also the Soviet
            Union, which was represented, besides by the authors, also by
            G. A. Firsov, A. I. Voznesenskiy and V. V. Semenov-Tyan'
            shanskiy. The conference carried out its work in 4 sections.
            The representatives of the USSR reported on the following
            matters: The statistical analysis of values concerning the
            rolling of ships (A. I. Voznesenskiy and G. A. Firsov); on the
            investigation of the decrease of the speed of ships in the case
            of irregular waves (A. I. Voznesenskiy and V. I. Pershin); on
            the flowing out of tidal waves from a straits into the open
            sea (S. S. Voyt); on spatial inclinations of ships of equal
Card 1/2   volume (V. V. Semenov-Tyan'shanskiy); on the influence exer-

The Study of the Motion of Ships and the Work Carried Out in   30-1-16/39
Test Basins. Conference: in Netherlands and Spain.

cised by water viscosity on wave resistance (L. N. Sretenskiy);
on the investigation of the inclination of ships caused by
wind (G. A. Firsov and K. K. Fedyayevskiy). After the end of
this conference the majority of the delegates went to Madrid,
where, on September 15, the 8th International Conference on
Test Basins was opened, which was attended by the represent-
atives of 25 countries. This was the first time that the Soviet
Union took part in such a conference, and nothing is said
about reports made by their delegates. Two representatives of
the USSR (A. I. Voznesenskiy and Yu. V. Krivtsov), who are both
collaborators of the Scientific Research Institute imeni
A. N. Krylov, were elected members of the new technical
committee.

ASSOCIATION: AN USSR (AN SSSR).

AVAILABLE: Library of Congress

1. Ships-Motion   2. Ships-Velocity   3. Ship-Test results

Card 2/2

AUTHOR: Sretenskiy, L. N., Corresponding   2o-119-6-15/56
            Member, Academy of Sciences, USSR

TITLE: On the Theory of Gas Jets (K teorii gazovykh struy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 119, Nr 6,
            pp. 1113 - 1114 (USSR)

ABSTRACT: The equation by S. A. Chaplygin for the determination of the
            flow function ψ (θ, τ) of the steady gas flow

$$\frac{\partial}{\partial \tau} \frac{2\tau}{(1-\tau)^\beta} \frac{\partial \psi}{\partial \tau} + \frac{1 - (2\beta + 1)\tau}{2\tau(1-\tau)^{\beta+1}} \frac{\partial^2 \psi}{\partial \theta^2} = 0 \text{ possesses,}$$

apart from the particular solutions given by S.A.Chaplygin
another family of particular solutions, which permit to solve
several new problems on the jet-like motion of a gas. The so-
lutions consist of a function, being the product of a function
$\Theta(\theta)$ and the function $T(\tau)$. These functions represents integrals
of the differential equations

Card 1/3
$$d^2\Theta/d\theta^2 - n^2\Theta = 0$$

On the Theory of Gas Jets

$2o-119-6-15/56$

-like mounting is fitted, through which a compressed gas is ejected into free space. The flow function of this gas flow is wanted here. For this purpose the solution written down in the first section of this paper of the Chaplygin equation is employed. The thus resulting ψ is written down explicitly. It is possible to solve a few other problems of the theory of gas jets with the same computation method, which were solved by N. Ye. Zhukovskiy for an incompressible liquid. There are 1 figure and 1 reference, 1 of which is Soviet.

SUBMITTED: January 29, 1958

Card 3/3

LUZIN, Nikolay Nikolayevich [deceased]; SRETENSKIY, L.N., otv.red.toma;
LAVRENT'YEV, M.A., akademik, red.; GERMOGENOV, A.V., red.izd-va;
SHEVCHENKO, V.G., tekhn.red.

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akad.
nauk SSSR. Vol.3. [Studies on various problems in mathematics]
Raboty po razlichnym voprosam matematiki. 1959. 505 p.
(MIRA 12:8)

1. Chlen-korrespondent AN SSSR (for Sretenskiy).
(Mathematics)

LYAPUNOV, A.M., akademik; SRETENSKIY, L.N., red.; NIKOLAYEVA, L.K.,
    red.izd-va; GUSEVA, A.P., tekhn.red.

    [Collected works] Sobranie sochinenii. Moskva, Izd-vo Akad.
    nauk SSSR. Vol.4. 1959. 644 p.   (MIRA 12:11)

    1. Chlen-korrespondent AN SSSR (for Sretenskiy).
                (Equilibrium)

STRETENSKIY, L. N.

Remarks on the Posthumus Work of N. N. Luzin on the Integration of the Equations of Curvature of Surfaces on the Principal Axis. In the book: Luzin N. N. Sobr. soch. (Luzin, N. N. Collected Works), Vol. 3, Raboty po razlichnym voprasam matematiki (Works on Various Problems of Mathematics), Moscow, Publishing House of the Academy of Sciences USSR, 1959, pp. 461-466. Bibliography of 3 Titles.

SOV/179-59-1-8/36

AUTHOR: Sretenskiy, L. N. (Moscow)

TITLE: On the Wave Resistance of Ships in the Presence of Internal Waves (O volnovom soprotivlenii sudna pri nalichii vnutrennikh voln)

ABSTRACT: The problem of wave resistance of ships in the presence of internal waves can be simplified when an assumption is made that a liquid flows around a stationary object such as a ship. Then the system of coordinates of potential velocity can be expressed as:

$$\Phi_1 = cx + \varphi_1(x, y, z), \quad \text{and} \quad \Phi_2 = cx + \varphi_2(x, y, z)$$

where 1 and 2 denote an upper layer affecting the ship and lower, remaining layer of liquid respectively, c – velocity, φ – coefficient of motion described by Eq. (1). Two conditions can be found for the discontinuity between the two

Card 1/4

On the Wave Resistance of Ships in the Presence of Internal Waves

layers: a condition of equilibrium of the vertical velocity
of two different densities (Eq.(2)) and a condition of con-
tinuity of pressure, (Eq.3) (ρ_1, ρ_2 - densities of upper and
lower layers, h' - depth of lower layer). The functions φ'
and φ'' from the expressions (4) can be shown as equal to
Eqs.(5). When the functions A, B, C are calculated as in
Eq.(6), the expression for the potential of velocity φ'' can
be written as Eq.(7). This formula becomes Eq.(15) after
performing the transformations Eqs.(9-14). The formula (15)
can be applied in determining the wave resistance of the Mitchell
type ships. In this case a relationship of the potential of
velocities produced by motion of ships and the potential of
components on the diametrical plane (S) of the ship ex-
pressed as :

$$F(x, z) = -\frac{c}{2\pi} \frac{\partial f(x, z)}{\partial x}$$

(y = f(x,z) - equation of ship's surface) should be consid-
ered. Therefore, the formulae (4) and (5) should be adjusted
by taking x-ξ instead of x and by taking $Q = 4\pi F(x, z)$.
Then the function $\Phi_2(x, 0, z)$ is found (bottom of p 60) and

Card 2/4 the equation of wave resistance R is evaluated (Eqs.(16) and

SOV/179-59-1-8/36

On the Wave Resistance of Ships in the Presence of Internal Waves

(17)). If $p_1 = \infty$, $r = 1$ in Eq.(17), then the formula can be applied for the Mitchell ships for shallow waters in order to find the wave resistance of the submerged rigid body in the lower layer, the potential of velocity Φ_1 (Eqs.(18), (19) and (20)) of a 2-layer liquid is calculated for the depth $\zeta < - h$. In this case the harmonic functions φ' and φ'' are expressed as in Eq.(5), while the unknown functions $A(k, \theta)$, $B(k, \theta)$ and $C(k, \theta)$ are calculated from Eqs.(1), (2) and (3). In order to transform Eq.(19) into Eq.(20) the value of Q is taken as $Q = 2c\partial f(\xi,\zeta)/\partial\xi$, and Eq.(20) is substituted into the equation of wave resistance:

$$R = 2\rho_1 c \iint_{(S)} \left[\frac{\partial \Phi_1 (x, 0, z)}{\partial x} - c \right] \frac{\partial f}{\partial x} \, dx \, dz \qquad ,$$

Card 3/4 (the final form of which is given at the bottom of p 63).

SOV/179-59-1-8/36

On the Wave Resistance of Ships in the Presence of Internal Waves

where γ_0 is equal to the positive root of Eq.(12) when Eq.(11) is applied, or $\gamma_0 = 0$ when Eq.(10) is applied. There are no figures or references.

SUBMITTED: September 8, 1958.

Card 4/4

66469

10(4)

AUTHOR: Sretenskiy, L. N., Corresponding Member, AS USSR

SOV/20-129-1-15/61

TITLE: Diffraction of Waves in the Cauchy-Poisson Problem

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1,
             pp 59 - 60 (USSR)

ABSTRACT: A semiplane may be assumed to be vertically immersed into
             an infinitely deep and heavy fluid, the edge of which is also
             vertical. It is then assumed, that a concentrated initial
             increase in the volume S occurs at a certain point A of the
             fluid surface at zero time. Then the formulas for determining
             the shape of the fluid surface in an arbitrary moment is deter-
             mined by the author. In this way the propagation of the waves
             may be found, which touch the solid partition. This problem
             of the unsteady wave diffraction was the subject of the disserta-
             tion by L. A. Boyko to obtain the degree of a candidate (Ref 1),
             L. A. Boyko investigated this problem by expansion into infinite
             series. According to the opinion of the author the method by
             A. Sommerfeld (which was also applied in the present paper)
             yields a more complete and more simple solution of the problem,
Card 1/3   than the method of infinite series. The position of the particle

66469

Diffraction of Waves in the Cauchy-Poisson Problem SOV/20-129-1-15/64

of the fluid is determined by 3 cylindrical coordinates Θ, r, z. The angle Θ is calculated from the intersection line of the immersed plane with the undisturbed surface of the fluid. An expression for the distance R between an arbitrary point of the fluid surface and the place of the initial concentration of the fluid is given. Without partition, it would be possible to determine the velocity potential by means of a known formula of the Cauchy-Poisson problem. The author shows, that also the present problem of the hydrodynamics of waves may be solved by the formula

$$\varphi(\Theta,r,z,t)=(gS/2\pi\int_{0}^{\infty}(\sin\,\sigma t/\sigma)e^{kz}J_{0}(kR)k\,dk\quad(\text{where }\sigma^{2}=gk)\text{ by}$$

the application of the method by Sommerfeld to the theory of diffraction of light waves. In the above formula, however, the Bessel-function J_{0} (kR) has to be replaced by a certain function $\Psi(\Theta,r,k)$ which is defined in detail by the present paper. The complete rise of the fluid level may be described by the follow-ing system of formulas:

Card 2/3

SRETENSKIY, L. N., SEKERZH-ZEN'KOVICH, Ya. I.   (MOSCOW)

   "The Cauchy-Poisson Problem for Waves of Finite Amplitude."

report presented at the First All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 27 Jan - 3 Feb 1960.

SRETENSKIY, L. N.   (Moscow)

"The theory of tides and related problems."

report presented at the First All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 27 Jan - 3 Feb 1960.

SRETENSKIY, L. N.   (Moscow)

"Sur Les Oscillations Non-Stationnaires Des Corps Flottants."

report submitted for the Xth International Congress of Applied Mechanics,
Stresa, Italy, 31 Aug - 7 Sep 60.

GRETENKII, L. N.

"Sur les Oscillations Non-Stationnaires des Corps Flottants."

report to be submitted for the Intl. Council of the Aeronautical Sciences,
Second International Congress, Zurich, Switzerland, 12-16 Sep 60.

10.4000

AUTHOR: Sretenskiy, L. N., Corresponding Member   S/020/60/131/02/015/071
              of the IS USSR   B013/B011

68977

TITLE: A Hydrodynamic Problem Connected With the Tsunami Problem

ABSTRACT: This paper presents the summary of the investigation of a problem
              in the theory of long-wave propagation in a rotating basin. The
              author investigates nonstabilized waves which formed at some initial
              disturbances. Such disturbances may be shocks accompanying sub-
              terranean earthquakes and producing the so-called "Tsunami waves".
              The author here intends to investigate, on the simplest assumptions,
              the reflection of Tsunami waves from a straight shore. Using the
              known denotations, the system of equations of the long waves in a
              basin of constant depth h reads

$$\frac{\partial u}{\partial t} - 2\omega v = - g\frac{\partial \zeta}{\partial x}, \quad \frac{\partial v}{\partial t} + 2\omega u = - g\frac{\partial \zeta}{\partial y}, \quad \frac{\partial u}{\partial x} + \frac{\partial v}{\partial y} + \frac{1}{h}\frac{\partial \zeta}{\partial t} = 0.$$

              The determination of the function $\zeta(x,y,t)$ is reduced to the inte-
              gration of the two equations $gh\Delta\zeta' - 4\omega^2\zeta' = - 2\omega h\left[\frac{\partial v(0)}{\partial x} - \frac{\partial u(0)}{\partial y}\right] +$

$+\, 4\omega^2\zeta(0) ; \quad \frac{\partial^2 Z}{\partial t^2} + 4\omega^2 Z = gh\Delta Z; \quad \zeta = \zeta' + Z.$ The first equation (in

Card 1/3

A Hydrodynamic Problem Connected With the Tsunami Problem

which $u(0)$, $v(0)$, $\zeta(0)$ denote the present initial values of the functions u, v, ζ) determines that part of the total height of the wave which has become steady, the second equation determines the nonsteady part of the wave process. The latter part is determined from the following initial and boundary conditions:

$$Z(x,y,0) = \zeta(0) - \zeta'(x,y) \ , \quad \frac{\partial Z(x,y,0)}{\partial t} = - h\left[\frac{\partial u(0)}{\partial x} + \frac{\partial v(0)}{\partial y}\right] ,$$

$$\left[2\omega \frac{\partial Z}{\partial x} - \frac{\partial^2 Z}{\partial t\, \partial y}\right]_{y=0} = 0.$$ The basin is extended unlimitedly to all sides from the coordinate axis $y = 0$ and corresponds to the positive values of y. The function $Z(x,y,t)$ is sought in the form of the

integral $Z(x,y,t) = \int_{-\infty}^{\infty} A(t,y;k)e^{ikx}dk$. A formula for the determination of the function $A(t,y,k)$ is then derived. A complete representation of the whole investigation with a discussion of the individual special problems will be published by the Izvestiya AN SSSR, seriya geofizicheskaya.

Card 2/3

85522

S/020/60/133/003/024/031/XX
B019/B067

_IL.7600   16.3500_

AUTHORS: Sretenskiy, L. N., Corresponding Member of the AS USSR, and
             Sekerzh-Zen'kovich, Ya. I.

TITLE: The Cauchy-Poisson Problem for Finite-amplitude Waves

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 3,
             pp. 544 - 545

TEXT: The horizontal surface of an infinitely deep heavy liquid which is
enclosed by two walls is given a certain initial velocity which is
different at the various points of the surface. The authors determine the
resulting motion of the liquid by taking full account of the boundary
conditions of the problem on the open surface of the liquid, i.e., they
study not only infinitely small motions. By using the method of
Lindstedt-Poincaré from celestial mechanics, this problem is solved by
means of Lagrange variables, a, b, and t. If $\xi(a, b, t)$ and $\eta(a, b, t)$ are
the deviations of the liquid particles from their coordinates a, b at the
beginning of motion, the following set of equations is valid for the
determination of these deviations:

Card 1/3

85522

The Cauchy-Poisson Problem for Finite-amplitude Waves

S/020/60/133/003/024/031/XX
B019/B067

$$\partial^2 \xi / \partial t^2 = -\partial H / \partial a + D(\eta, H)/D(a, b)$$
$$\partial^2 \eta / \partial t^2 = -\partial H / \partial b - D(\xi, H)/D(a, b)$$
$$\partial \xi / \partial a + \partial \eta / \partial b = -D(\xi, \eta)/D(a, b),$$

where $H = (p/\varrho) + g(b + \eta)$; $p =$ hydrodynamic pressure, and $\varrho =$ density.
For the initial velocity potential the following ansatz is made

$$\varphi(a, b) = \sum_{n=1}^{\infty} \varepsilon^n A_n e^{nb} \cos na \text{ from which the coefficients of the series}$$

$$\xi = \varepsilon \xi_1 + \varepsilon^2 \xi_2 + \ldots ; \qquad \eta = \varepsilon \eta_1 + \varepsilon^2 \eta_2 + \ldots ,$$

$$H = \varepsilon H_1 + \varepsilon^2 H_2 + \ldots$$

may be computed. These coefficients are obtained in the form of trigono-metric series, and are arranged according to the arguments $w_1 \ldots w_2$.

The following relation holds for w_i:

$$w_i = (\sigma_{io} + \varepsilon \sigma_{i1} + \varepsilon^2 \sigma_{i2} + \ldots)t \qquad (i = 1, 2, \ldots). \text{ In determining the}$$

functions ξ_i, η_i, H_i, and σ errors may easily occur, and the authors

Card 2/3

SKRETENSKIY, L. N.

Elastic Waves Arising from Normal Stresses Applied to the Surface of a Hemisphere. In the book: Problemy makhaniki sploshnoy sredy. K 70-letiyu akademika N. I. Muskhelishvili (Problems of the Mechanics of a Solid Medium. On the 70th Birthday of Academician N. I. Muskhelishvili), Moscow, Publishing House of the Academy of Sceinces USSR, 1961, pp. 411-427.

SRETENSKIY, L.N.

Cauch-Poisson problem for waves of finite amplitude. Trudy
MGI 24:3-24 '61.   (MIRA 14:6)
                          (Waves)

SRETENSKIY, L.N.; STAVROVSKIY, A.S.

Computing the height of tsunamis along the cost. Trudy MGI
24:25-47 '61.   (MIRA 14:6)
                        (Tidal waves)

Sketevskiy, L. A.

PHASE I BOOK EXPLOITATION   SOV/6201

(2)

Vsesoyuznyy s"yezd po teoreticheskoy i prikladnoy mekhanike. 1st, Moscow, 1960.

Trudy Vsesoyuznogo s"yezda po teoreticheskoy i prikladnoy mekhanike,
27 yanvarya -- 3 fevralya 1960 g. Obzornyye doklady (Transactions of the
All-Union Congress on Theoretical and Applied Mechanics, 27 January to
3 February 1960. Summary Reports). Moscow, Izd-vo AN SSSR, 1962.
467 p. 3000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po
teoreticheskoy i prikladnoy mekhanike.

Editorial Board: L. I. Sedov, Chairman; V. V. Sokolovskiy, Deputy Chairman;
G. S. Shapiro, Scientific Secretary; G. Yu. Dzhanelidze, S. V. Kalinin,
L. G. Loytsyanskiy, A. I. Lur'ye, G. K. Mikhaylov, G. I. Petrov, and
V. V. Rumyantsev; Resp. Ed.: L. I. Sedov; Ed. of Publishing House:
A. G. Chakhirev; Tech. Ed.: R. A. Zamarayeva.

Card 1/6

Transactions of the All-Union Congress (Cont.)   SOV/6201   (25)

PURPOSE: This book is intended for scientific and engineering personnel who
are interested in recent work in theoretical and applied mechanics.

COVERAGE: The articles included in these transactions are arranged by
general subject matter under the following heads: general and applied me-
chanics (5 papers), fluid mechanics (10 papers), and the mechanics of rigid
bodies (8 papers). Besides the organizational personnel of the congress,
no personalities are mentioned. Six of the papers in the present collection
have no references; the remaining 17 contain approximately 1400 references
in Russian, Ukrainian, English, German, Czechoslovak, Rumanian, French,
Italian, and Dutch.

TABLE OF CONTENTS:

SECTION I. GENERAL AND APPLIED MECHANICS

Card 2/6

Transactions of the All-Union Congress (Cont.)   SOV/6201

SECTION III. MECHANICS OF RIGID BODIES

Card 5/6

STRETENSKIY, L. N.

STRENTENSKIY, L. N.

"Motion of a solid body satisfying Appel'rot conditions."

Report presented at the Conference on Applied Stability-of-Motion Theory and Analytical Mechanics, Kazan Aviation Institute, 6-8 December 1962

SRETENSKIY, L.N.

Fairbairn's method for the integration of tide equations. Izv.
AN SSSR. Ser. geofiz. no.7:947-954 Jl '62.   (MIRA 15:7)
                  (Tides) (Differential equations)

EWP(r)/EWT(m)/BDS--AFFTC/APGC--EM
L 10785-63
ACCESSION NR:AP3001039   s/0055/63/000/003/0060/0071

AUTHOR: Sretenskiy, L. N.   53
                                                              52
TITLE: On particular cases of the motion of a heavy solid body with a
gyroscope

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika,
no. 3, 1963, 60-71

TOPIC TAGS: Goryachev-Chaply*gin gyroscope, Appel'rot gyroscope, motion equation
integrability, solid-body motion

ABSTRACT: Particular cases of the motion of a heavy solid body with one fixed
point connected with a gyroscope made of a homogeneous material and rotating
about a fixed axis are studied. General dynamics equations are written and
their integrability is studied for two particular cases: 1) a gyroscope of the
Goryachev-Chaply*gin type with principal moments of inertia A, B, and C and
the coordinates of the center of gravity ξ, η, and ζ satisfying the conditions
$A = B = 4C$, $\eta = \xi = 0$, and $\gamma \neq 0$, and 2) a gyroscope of the Appel'rot type
with A, B, C, ξ, η, and ζ satisfying the conditions $\eta = 0$ and .

Card 1/2

L 10785-63
ACCESSION NR: AP3001039

$A(B-C)\xi^2 - C(A-B)\gamma^2 = 0$. When $\lambda = \mu = 0$ (λ and μ are projections of moments of the gyroscope onto coordinate axes), it is shown that in the first case the equations of motion, besides the energy integral, have another integral, dependent on an arbitrary constant; equations of motion can be integrated in quadratures and all six unknowns can be expressed in terms of hyperelliptic time functions. In the second case when $\mu = 0$, three particular integrals are written, and the problem of integrating the equations of motion is reduced to integration of Ricatti-type equations. The straight line connecting the fixed point with the center of gravity of the body is shown to move in exactly the same manner as the axis of the Lagrange gyroscope. Orig. art. has: 32 equations.

ASSOCIATION: Kafedra gidromekhaniki Moskovoskogo universiteta (Department of Hydromechanics, Moscow University)

SUBMITTED: 25Dec62   DATE ACQ: 17Jun63   ENCL: 00

SUB CODE: MM, A I   NO REF SOV: 000   OTHER: 000

Card 2/2

SRETENSKIY, L.N.

      Hydrodynamic problem related to the tsunami problem.   Trudy Mor.
      gidrofiz. inst.AN URSR   27:3-10   '63.   (MIRA 17:3)

SRETENSKIY, L.N. (Moskva)

Periodical waves generated by a source situated over an inclined
bottom. Prikl. mat. i mekh. 27 no.6:1012-1025 N-D '63.   (MIRA 17:1)

SRETENSKIY, L.N.

Some cases of integrability of the equations of gyrostat motion.
Dokl. AN SSSR 149 no.2:292-294 Mr '63.   (MIRA 16:3)

1. Chlen-korrespondent AN SSSR.
            (Gyroscope) (Differential equations)

AMINOV, M.Sh., red.; BOGOYAVLENSKIY, A.A., red.; KALININ, S.V., red.; KUZ'MIN, P A., red.; LUR'YE, A.I., red.; MATROSOV, V.M., red.; RUMYANTSEV, V.V., red.; SRETENSKIY, L.N., red.

[Proceedings of the interuniversity conference on the applied theory of the stability of motion and on analytic mechanics] Trudy Mezhvuzovskoi konferentsii po prikladnoi teorii ustoichivosti dvizheniia i analiticheskoi mekhanike. Kazan', Kazanskii aviatsionnyi in-t, 1964. 144 p.

(MIRA 18:12)

1. Mezhvuzovskaya nauchnaya konferentsiya po analiticheskoy mekhanike i ustoychivosti dvizheniya, Kazan, 1962.

SRETENSKIY, L. N.

"On the diffraction of waves caused by strips."

report submitted for 11th Intl Cong of Theoretical & Applied Mechanics & General Assembly, Munich, 30 Aug-5 Sep 64.

L 04998-67   EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)   GD
ACC NR: AT6016798   (N)   SOURCE CODE: UR/0000/65/000/00./0389/0396

AUTHOR: Sretenskiy, L. N.

ORG: Moscow University, Moscow, SSSR (Moskovskiy universitet)

TITLE: Periodic waves generated by a source located over an inclined bottom

SOURCE: International Symposium on Applications of the Theory of Functions in Continuum Mechanics. Tiflis, 1963. Prilozheniya teorii funktsiy v mekhanike sploshnoy sredy. t. 2: Mekhanika zhidkosti i gaza, matematicheskiye metody (Applications of the theory of functions in continuum mechanics. v. 2: Fluid and gas mechanics, mathematical methods); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 389-396

TOPIC TAGS: periodic wave, wave propagation, surface wave, water wave, fluid flow, wave mechanics

ABSTRACT: In recent years, various authors have published many extremely interesting articles on investigations of the wave motions of a fluid in a basin having a flat bottom inclined toward the horizon. These investigations have been described in a book by J. J. Stoker (Water Waves: The Mathematical Theory with Applications. New York-London, Interscience

Card   1/2

L 04998-67

ACC NR: AT6016798 O

Publishers, 1957[Translation. Moskva, Izd-vo inostr. lit., 1959]) and in a review by J. V. Wehausen and E. V. Laitone (Surface Waves. — In: Handbuch der Physik, 9. Berlin, Springer-Verlag, 1960, p. 446-778.). Using the methods of these investigations, the present author attempts to provide a solution to waves generated on the surface of a fluid by a periodically acting source located at a certain depth over a uniformly inclined bottom. In this case, it is assumed that the angle of inclination of the bottom to the horizon is a simple fraction of 90°; furthermore, only plane-parallel potential motion is examined. The formulas derived make it possible to find a distribution of the vibration source such that the progressive periodic waves will not tend toward infinity. Orig. art. has: 1 figure and 15 formulas.

SUB CODE: 20/   SUBM DATE: 13Sep65/   ORIG REF: 002

Card   2/2

L 2804-66   EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

UR/0040/65/029/004/0667/0671

ACCESSION NR: AP5021301

AUTHOR: Sretenskiy, L. N. (Moscow)

TITLE: The formation of waves of finite amplitude by a fluid source

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 4, 1965, 667-671

TOPIC TAGS: fluid mechanics, Bernoulli equation, wave surface, wave propagation, flow profile

ABSTRACT: Parallel planar potential flow of a heavy fluid of infinite depth is studied. The flow stems from a source of constant intensity located under the fluid surface. The surface is horizontal in the absence of an active source and is covered by waves in the presence of the source. The purpose of the study is to determine the form of the waves created by the source perturbation. The wave forms are referenced to the coordinate system shown in Fig. 1 on the Enclosure. Wave motion occurs in the x, 0, y plane; the origin of coordinates is taken at the fluid source, axis y is positive in the upward vertical direction. A denotes the point of the wave where it intersects the axis. B and C are points on the fluid surface located at an infinite distance from A. Two complex variables are introduced and related to the flow geometry. The problem is reduced to finding coefficients for one function which may be expressed in the form of a Maclaurin series. A system of

Card 1/3

L 2804-66

ACCESSION NR: AP5021301

simultaneous equations for obtaining the desired coefficients is set up with the use of the Bernoulli flow equation. The coordinate system selected is advantageous in affording a reduction in computations through consideration of symmetry conditions. The surface geometry can be completely defined by the method described and through the use of appropriate boundary conditions. Orig. art. has: 17 equations and 4 figures.

ASSOCIATION: none

SUBMITTED: 05Apr65   ENCL: 01   SUB CODE: ME

NO REF SOV: 000   OTHER: 000

Card 2/3

L 2804-66

ENCLOSURE: 01

Fig. 1.
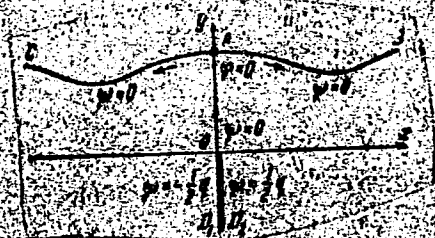
Card 3/3

SRETENSKIY, L.N., prof.

Progressive surface waves of the general type. Vest. Mosk. un.
Ser. 1: Mat., mekh. 21 no.1:90-97 Ja-F '66.   (MIRA 19:1)

1. Kafedra gidromekhaniki Moskovskogo gosudarstvennogo universiteta.
Submitted March 11, 1965.

L 27118-66   EWT(1)/EWP(m)/EWA(d)/ETC(m)-6/EWA(1)   WW/GW

ACC NR: AP6016892   SOURCE CODE: UR/0055/66/000/001/0090/0097

AUTHOR: Sretenskiy, L. N.

ORG: Department of Hydromechanics, Moscow State University (Kafedra gidromekhaniki Moskovskogo gosudarstvennogo universiteta)

TITLE: Progressive surface waves of general form

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 1, 1966, 90-97

TOPIC TAGS: longitudinal wave, transverse wave, dimensional flow, integral equation

ABSTRACT: The surface waves considered resemble those made by a ship. The family of progressive waves propagating on the surface of a three-dimensional flow consists of simple sinusoidal forms as well as highly complex structures. These waves are determined by formulas containing an arbitrary function of one argument. From a set of four equations derived for the liquid surface, integral equations are obtained for two complex progressive waves of general form. These are used to derive asymptotic equations. Conclusions are then reached for four waves for each of which has longitudinal and transverse structure. Symmetry and antisymmetry characteristics of these waves are indicated. Orig. art. has: 12 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 11Mar65

Card 1/1

UDC: 532.592

AUTHOR: Sretenskiy, M.V., Laboratory Assistant   47-58-1-24/35

TITLE: The Perfecting of the Lighting System in a Physics Laboratory
                (Usovershenstvovaniey elektroosvetitel'noy fizicheskogo ka-
                bineta)

PERIODICAL: Fizika v Shkole, 1958, # 1, p 66 (USSR)

ABSTRACT: This is a description of a system to allow the teacher to
                switch on the light in a physics laboratory - when the ex-
                periment has necessitated putting the light off - without
                returning to the main switch.
                   There are 2 diagrams.

ASSOCIATION: 630-ya srednyaya shkola g. Moskvy (The 630th Secondary School,
                Moscow)

AVAILABLE: Library of Congress

Card 1/1

GAY, Ye.; SRETENSKIY, M. V.

Installing lights for a New Year celebration. Politekh.obuch.
no.12:80-81 D '58.   (MIRA 11:12)

1. Srednyaya shkola No.630, g. Moskva.
              (Lighting, Architectural and decorative)

SREFENSKIY, V. N.

Barley

Using oats and barley as supplemental green feed. Korm. baza 3 no. 4:56-58 Ap '52

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, July 1952 Uncl.

SHAFTROSKIY, V. L.

Sunflowers

Effect of the nutritional area per plant on the amount of haulm and the feed value of the silage sunflower. Korm. baza 4, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

SRETENSKIY V. N

USSR/Electronics - Literature

May 52

"New Books"

"Radio" No 5, p 62

Lists the following books: V. I. Siforov's "Radio Receiving Equipment",
S. A. Drobov's "Radio Transmitting Equipment", R. A. Valitov and
V. N. Sretenskiy's "Radio Measurements at Super-High Frequencies", 1951
V. D. Kryzhanovskiy's "Automobile radio Reception", and M. N. Savost'yanov's
"Repair of Radio Equipment".

238T86

PHASE I BOOK EXPLOITATION   1011

- Valitov, Rafkat Amirkhanovich and Sretenskiy, Vasiliy Nikolayevich

Radioizmereniya na sverkhvysokikh chastotakh (Microwave Measurements)
2d ed., rev. and enl. Moscow, Voyen. izd-vo M-va obor. SSSR,
1958. 411 p. No. of copies printed not given.

Ed.: Tikhonov, S. N.; Tech. Ed.: Strel'nikova, M. A.

PURPOSE: This book is addressed to engineers, technicians, and to
students enrolled in vuzes.

COVERAGE: The monograph discusses particular problems of meas-
urement technique in the metric, decimetric and centrimetric
ranges. The discussions are accompanied by examples and short
descriptions of the instruments involved, i.e., technical data
and requirements. Basic considerations in selecting the individ-
ual components of measuring instruments and circuits are discussed,
as well as the fundamentals of instrument error analysis.

Card 1/11

Microwave Measurements

1011

Considerable attention has been given to broad-band measuring instruments. The book discusses several methods of measuring electrical quantities at frequencies below 100 Mc. Problems concerning measurement of vacuum-tube, antenna, transmitter and receiver parameters have not been discussed in this book, nor have certain special problems in error calculation (i.e., the effects of subjective factors). For this the reader is referred to Professor M. F. Malikov's book "Osnovy metrologii" (Fundamentals of Metrology), 1949. No personalities are mentioned. There are 9 references, all Soviet (including 3 translations).

TABLE OF CONTENTS:

Card 2/11

BOOK EXPLOITATION   S/

AM4022015

Sretenskiy, V. N.

Principles of application of super-high frequency electronic in-
struments; properties, investigating methods and appraisal of
accuracy in application of super-high frequency instruments
(Osnovy* primeneniya elektronny*kh priborov sverkhvy*sokikh
chastot; svoystva, metody* issledovaniy i otsenka pravil'nosti
primeneniya priborov SVCh) Moscow, "Sovetskoye radio", 63.   0416
p. illus., biblio. Errata slip inserted. 15,200 copies printed.

TOPIC TAGS: microwaves, microwave tube, triode, magnetron, kly-
stron, traveling wave tube, backward wave tube, microwave equip-
ment, microwave equipment reliability, microwave equipment operating
condition, microwave equipment interconnection

PURPOSE AND COVERAGE: The book presents the principles of micro-.
wave equipment applications, with principal attention paid to in-

Card   1/4

AM4022015

creasing the operating reliability of the apparatus. Experience is
reported in the use of devices under conditions that affect adverse-
ly the service life and the operating stability. The properties
and technical characteristics of most widely used microwave tubes
and devices are analyzed and their operating features pointed out.
Methods are considered for checking the correctness of application
of electronic microwave devices in apparatus, including estimates of
the type of device employed, operating conditions, interchangeabil-
ity, and means of protecting the apparatus against external effects.
In conclusion, the author thanks Ye. I. Kurkova for considerable
help with the calculations and preparing the manuscript; V. M.
Pivovarov, N. S. Bukhteyeva, N. N. Bulatova, K. V. Ditman, L. V.
Panchenko, and V. A. Shchedrovich for help with the experiments;
V. P. Balashov, R. A. Valitov, I. Ye. Yefimov, S. V. Kukarin, M. P.
Kuz'michev, and Yu. N. Khlopov for critical remarks, and S. I.
By*chkov and Ye. D. Naumenko for reviewing the manuscript.

Card   2/4

AM4022015

TABLE OF CONTENTS [abridged]:

Foreword - - 3

Ch. 1. Principles - - 8
Ch. 2. Triodes and modifications of tubes with grids for microwave
frequencies - - 34
Ch. 3. Pulsed magnetrons and other high-power generating and ampli-
fying microwave tubes - - 96
Ch. 4. Reflex klystrons and low-power backward-wave tubes - - 178
Ch. 5. Low noise traveling-wave tubes, parametric and quantum am-
plifiers - - 235
Ch. 6. Combined operation of electronic microwave devices in radar
stations - - 266
Ch. 7. Reliability of electronic microwave devices and estimates
of the operating conditions, applications, and inter-connection
in the apparatus - - 317

Card 3/4

AM4022015

Appendices - - 384

SUB CODE: GE, SD, SP   SUBMITTED: 31Aug63   NR REF SOV: 176

OTHER: 118   DATE ACQ: 27Feb64

Card   4/4

DVINSKIKH Vasiliy   ....; MINSKIY, G.Ya., ...;
GRA.INSKII, V.I.., retsenzent; GRIGOR'EVA, L.V., red.

[Measurement of the parameters of amplifiers using a self-
excitation mode] Izmerenie parametrov usilitelei s prime-
neniem rezhima samovozbuzhdeniia. Moskva, Sovetskoe radio,
1965. 231 p.   (MIRA 18:9)

YEFIMOV, I.Ye.; GRODNEV, I.I., doktor tekhn. nauk, prof., retsenzent;
SUSHKEVICH, V.I., kand. tekhn. nauk, retsenzent; SRETENSKIY,
V.N., retsenzent; GOLOVANOVA, L.V., red.

[Radiofrequency transmission lines] Radiochastotnye linii pe-
redachi. Moskva, Sovetskoe radio, 1964. 599 p. (MIRA 17:5)

F. SRETER

Variations of carotene concentration in Hungarian spotted cattle. F. Sréter (Agr. Univ., Budapest). *Acta Vet. Acad. Sci. Hung.* 3, 379–400(1953)(in German).—The variations of carotene (I) and of vitamin A (II) concn. in the blood and milk of 40 cattle were detd. spectrophotometrically at intervals during a 7-week period beginning with the pasture season. Serum I rose steadily from 278 γ/100 ml. to 900 γ/100 ml.; serum II remained steady at 48–58 I.U./100 ml. Milk I rose from 7 to 28 γ/100 ml.; milk II rose from 42 to 108 I.U./100 ml. Individual variation is discussed in terms of genetic relationships.   J. P. Danehy

SRETER, F.

Seasonal changes in the carotenoid and vitamin A concentrations of equine serum and their economic importance. I. Ócsag and F. Sréter. *Acta Agron. Acad. Sci. Hung.* 5, 550-76(1955)(in German).—The carotenoid content of the fodder regulated the blood level and thus it was low during the winter months. High blood carotenoid concn. was assocd. with low vitamin A concn. Fertility of mares was lower and abortions were more common on very low carotenoid intakes.   S. Ellis

SRETER, F.

Blood catalase and liver function in Hungarian spotted cattle. F. Sréter and P. Széky. Agrártud. egy. Állattenyészt. Karan. Közlem., Gödöllő 1955, No. 9, 29-39. Dairy Sci. Abstr. 18, 845(1956).—Investigations involving 45 Hungarian spotted cows, with annual yields ranging from less than 2000 to more than 5000 kg. milk, indicated that a pos., though not very close, correlation existed between blood-catalase activity and milk production. Blood-catalase activity was not related to age.   K. L. C.

SARFY, Erzsebet,H.,; SRETER, Ferenc.

Simple phosphatase determination. Kiserletes orvostud. 8 no.3:
333-334 May 56

1. Orszagos Testneveles- es Sportegeszsegugyi Intezet Kozponti
Laborat.
        (PHOSPHATASES, determ.
            gradual photometry, method (Hun))

SRETER, Ferenc

Simultaneous determination of calcium, phosphorus and
magnesium by photometry in 0.5 cc of serum. Kiserletes orvostud.
8 no.4:443-445 July 56.

1. Orszagos Testneveles- es Sportegeszsegugyi Intezet koxponti
laboratoriuma.
        (BLOOD
            calcium, phosphorus & magnesium simultaneous determ.
            in minute quantity of serum by photometry (Hun))
        (CALCIUM, in blood
            simultaneous determ. with phosphorus & magnesium in
            minute quantity of serum by photometry (Hun))
        (PHOSPHORUS, in blood
            simultaneous determ. with calcium & magnesium in minute
            quantity of serum by photometry (Hun))
        (MAGNESIUM, in blood
            simultaneous determ. with calcium & phosphorus in minite
            quantity of serum by photometry (Hun))

GRETNER, Josip, ing.

Analyses and elements influencing the selection of machinery for the trampers of 10,000 ton carrying capacity. Brodogradnja 5 no.3:130-135 '54.

1. Brodarski institut, Zagreb.

SRETSENSKAYA, N.I.

Euglenophyta in the ponds of White Russian Polesye. Vestsi AN BSSR
Ser. biial. nav. no.1:48-52 '62.   (MIRA 17:9)

SREZNEVSKIY, Yu., inzh.-ekonomist

Methods of determining the economic effectiveness of investments
in the cereal products industry. Muk.-elev. prom. 27 no.1:21-23
Ja '61.   (MIRA 14:1)
                    (Grain elevators)

SREZNEVSKIY, Yu., inzh.-ekonomist

Planning and compensating costs of grain drying and cleaning.
Muk.-elev. prom. 27 no.7:21-22 Jl '61.   (MIRA 14:7)
(Grain--Cleaning) (Grain--Drying)

SRIBAR, B.

YUGO.

YUGO. The ratio water-air as important factor of the corrosion of metals in soil. Tihomil Marković and Bojan Sribar (Tehn. Fak., Zagreb, Yugoslavia). Zaltila .... 16-9 (1954); cf. C.A. 48, 12008i.—Metals like Fe and Al, were immersed in soil, and the current obtained in the chain Pt/ soil/metal, under N protection, was measured. The starting currents for fine sand, coarse sand, ordinary clay, montmorillonite, and sandy potter's clay are 0.08, 0.09, 0.14, 0.012, and 0.015 ma., resp.; the final currents after 70 min. are 0.001, 0.005, 0.0015, 0.001, and 0.0005 ma., resp. Thus it can be seen that soils rich in air and low in H_2O, like fine sand, do not corrode too much, and the same holds true for soils high in H_2O and low in air, like montmorillo- nite. But if the soil has sufficient H_2O to form the electro- lyte an. sufficient air to form the depolarizer, like ordinary clay, a heavy corrosion will occur. The fact that Pt was used as one electrode does not invalidate the expts., similar values are obtained in a chain: rough Fe/soil/polished Fe.
                                                    Werner Jacobson —

SRIBAR, B.

YUGO.

The influence of the electrolyte upon the rate of iron corrosion in the soil. T. Markovič and B. Sribar (Tehn. Fak., Zagreb, Yugoslavia). Zaštita materijala 1-3(1954); cf. C.A. 48, 1220c, 3817e, 12008i.—M. presents new evidence that Pt electrodes can be used to get correct information about soil corrosivity and the rate of corrosion of Fe in soil. NaCl (0–50 g.) were mixed with 25 g. sand (ground flint-stone) and the current in the cell Pt/NaCl + sand/Fe measured. Repeated measurements check within the exptl. error (±10%), if the ratio of the surfaces Pt:Fe is kept from 1:5 to 2:1. Similar expts. can be done with clay and other soils, also with $MgCl_2$ and $Ca(OH)_2$ as electrolytes. Curves are plotted of the currents measured vs. the humidity of the soil used, and an empirical equation $Q = kv^{-a}$ is derived, which best fits the curves obtained, where Q is the amt. of electricity, v the H_2O in the soil, and k and a are consts. which are characteristic for each kind of soil used.

Werner Jacobson

The mechanism of the corrosion of iron in soils. T. Markovic, Z. Dugi, and B. Sribar (Univ. Zagreb, Yugoslavia). *Werkstoffe u. Korrosion* 6, 834–7(1955); cf. *C.A.* 48, 12008i.—The behavior of Fe in soils depends on the water-air ratio of the soil. If the water content of the soil is below the satn. limit of the soil then corrosion processes can proceed. The rate of corrosion of Fe depends on the pH value of the soil if the corrosion takes place in an excess of O. Expts. indicate that the corrosion of Fe in unsatd. soils is a reaction of the 1st order; in water-satd. soils it follows the diffusion law. M. F. Quaely

SRIPAR, V.

    Report on archaeological sites in Lipanca-Pokljuka, near Bled. p. 319.

GEOGRAFSKI ZBORNIK. ACTA GEOGRAPHICA. Ljubljana. Vol. 3, 1955

c

So. East European Accessions List   Vol. 5, No. 9   September, 1956

PASHKOVSKIY, Anatoliy Ivanovich [Pashkivs'kyi, A.I.], agronom;
SRIBNA, K.A., red.

[On the Veselyi Maidan Farm] Na Veselomu Maidani. Kyiv,
Molod', 1964. 49 p.   (MIRA 18:4)

GITIS, S.S.; MALINOVSKIY, M.S.; PROKHODA, A.M.; SRIBNAYA, V.P.

Reactions of aromatic nitro compounds. Part 8: Interesterification of alkyl esters of nitro (methylsulfonyl)phenols. Zhur. ob. khim. 30 no.9:3072-3074 S '60.   (MIRA 13:9)

1. Dnepropetrovskiy gosudarstvennyy universitet.
        (Phenols)   (Nitro compounds)

TOLMACHEV, A.I.; SRIBNAYA, V.P.

Condensation of thiochromone with compounds containing active methyl or methylene groups. Zhur..ob.khim. 32 no.2: 383-390 F '62. (MIRA 15:2)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Thiochromone)

TOLMACHEV, A.I.; SRIBNAYA, V.P.; SHCHEGLOVA, L.V.

Chloro-substituted benzopyrylomonomethinecyanines. Zhur.ob.
khim. 33 no.2:440-447 F '63.   (MIRA 16:2)

1. Institut organicheskoy khimii AN UkrSSR.
   (Methinecyanine)   (Benzopyrylium compounds)

TOLMACHEV, A.I.; SRIBNAYA, V.P.

Interaction of benzothiapyrylium perchlorate with nucleophilic
agents. Zhur.ob.khim. 33 no.12:3864-3871 D '63.   (MIRA 17:3)

1. Institut organicheskoy khimii AN UkrSSR.

KRYLOVA, M.I.; ONOYEVAYA, V.L.; SR.DHNER, E.A.

Effect of the type of diet on fluorosis morbidity. Vop.pit. 16
no.1:48-52 Ja-F '57.   (MLRA 10:3)

1. Iz otdeleniya gigiyeny pitaniya (zaveduyushchiy - professor
N.I.Orlov) Gosudarstvennogo nauchno-issledovatel'skogo instituta
imeni Erismana, Moskva.
        (FLUORINE, pois.
            fluorosis, exper., relation to calcium intake in rats
            (Rus))
        (CALCIUM, metab.
            intake, relation to develop. of exper. fluorosis in rats
            (Rus))

SRIBNER, I.M.

Diabetes and atherosclerosis. Trudy Inst. klin. i eksper.
kard. AN Gru., SSR 8:111-112 '60.   (MIRA 17:7)

1. Kafedra patofiziologii meditsinskogo instituta, Odessa.

Distribution of blood sugar between the plasma and the erythrocytes. L. M. Srilner and G. A. Rapoport. *J. biol. méd. expd.* (U.S.S.R.) 16, 59-63(1930); *Physiol. Abstracts* 16, 350-1.—In normal blood the av. content of sugar in the erythrocytes is 80% of that in the plasma. In cyanosis as well as in normal blood satd. with CO_2 the erythrocytes contained more sugar. Satn. of the blood of cyanotic persons with O_2 produced a decrease in the erythrocyte sugar content. In diabetics the erythrocyte sugar content was relatively lower. Satn. of diabetic blood with CO_2 produced a relative increase in the erythrocyte sugar content. Conclusion: H_2CO_3 increases the permeability of the erythrocyte to glucose.   O. G.

ASM · SLA   METALLURGICAL LITERATURE CLASSIFICATION

II/H

Effect of hot mud (mineral) baths on the heart. I. M. Sribner. *Med. exptl.* (Ukraine) No. 11, 57-65(1935).— The minute blood vol. (acetylene method of Grollman) was detd. on healthy and sick subjects taking bath treatments at 40-53°. When the bath temp. was 40-42° the minute vol. increased only by 20-30%. A marked increase in the vol. occurred only above 44°, reaching a 300% increase at 48-50° (this was accompanied by an increase in the pulse rate and a general breakdown of the temp.-regulating mechanism). From 40° to 42° is the optimum temp. for treatment of patients.   S. A. Corson

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Physiological basis of the effect of carbon dioxide baths upon circulation. I. M. Sribner. - *Acta Med. U. R. S. S.* 3, 139-48(1940)(in English).—By means of a funnel partly filled with Ringer soln. CO₂ was applied to the skin in definite localities. After application of CO₂, acetylcholine and histamine were found in the Ringer soln. CO₂ increases the permeability of the skin to NaCl.   Felix Saunders

SRIBNER, I.M., prof.

Nikolai Nikiforovich Zaiko. Pat.fiziol. i eksp.terap. 2 no.6:59
N-D '58.   (Mira 12:1)

(Zaiko, Nikolai Nikiforovich, 1908-)

GOL'TSMAN, Abram Veniaminovich, kand.med.nauk; DMITRIYEVA, Irina Timofeyevna,
    kand.med.nauk; SKRIBNER, I.M., prof., red.; GITSHTEYN, A.D., tekhn.red.

[Principles of electrocardiography] Osnovy elektrokardiografii.
Kiev, Gos.med.izd-vo USSR, 1960. 182 p.   (MIRA 13:11)
                (ELECTROCARDIOGRAPHY)

16.9500

77483
SOV/103-21-1-14/22

AUTHOR: Sribner, L. A. (Odessa)

TITLE: Determination of Magnetic Permeance in Systems With
            Toothed Rotor and Stator

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 1,
            p 112-118 (USSR)

ABSTRACT: In the study is explained a method of calculation of
            magnetic permeance of the electromagnetic system
            when the leakage fluxes are acoounted for. Electro-
            magnetic system consists of toothed rotor and stator
            in which the width of the slots is equal to the
            width of teeth. Determination of fictitious air
            gap. Figure 1 shows the leakage fluxes taken under
            discussion:

Card 1/11

Determination of Magnetic Permeance in
Systems With Toothed Rotor and Stator
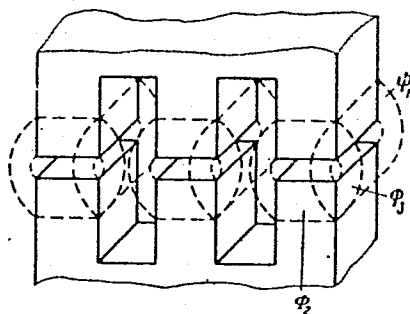
77483
SOV/103-21-1-14/22

Fig. 1.

Card 2/11

Determination of Magnetic Permeance In   77453
Systems With Toothed Rotor and Stator   SOV/103-21-1-14/22

Φ_1, Φ_2, and Φ_3 are leakage fluxes passing through
the lateral sides, ends, and edges of teeth, respect-
ively.   Neglecting the leakage fluxes, the fictitious
air gap is as follows:

$$\delta' = \frac{\delta_0}{\frac{a}{t}\left(1-\frac{l}{a}\right)} = \frac{\delta_0}{0.5\left(1-\frac{l}{a}\right)},\tag{1}$$

where δ_0 is the actual air gap, a is a tooth
width, $t = 2a$ is tooth pitch, i.e., the sum of
the width of the tooth and the slot, l is relative
shift between the rotor and the stator teeth.
Further analysis is made for $l = 0$. The magnetic
permeance of the basic flux for the tooth of unit
length is given as:

$$g = \frac{\mu_0 S}{\delta_0} = \frac{\mu_0 a}{\delta_0},\tag{2}$$

Card 3/11

where μ_c is magnetic permeability of the air and
S is the surface through which the magnetic flux
passes. In this case S = a. The additional magnetic
permeance is set up by leakage fluxes and for the
tooth of unit length it is:

$$g_p = k_p \frac{\mu_0 a^2 a}{\delta_0}. \qquad (3)$$

where k_p is a leakage coefficient expressing the
ratio of δ_o to the equivalent air gap δ_o eq

corresponding to the leakage fluxes. Setting up an
equation for the total magnetic permeance, the
following equation for the fictitious air gap is
obtained:

$$\delta' = \frac{\delta_0}{a_0^2 + k_p}.$$

Card 4/11

Determination of Magnetic Permeance in
Systems With Toothed Rotor and Stator

77483
SOV/103-21-1-14/22

For $l \neq 0$, if a shift takes place between the teeth
of rotor and stator then this equation changes to:

$$\delta' = \frac{\tilde{\iota}_0}{0{,}5\left(1 - \frac{l}{a}\right) + k_\nu} \qquad (6)$$

Considering the magnetic permeance of the lateral
leakage flux. First, the case is discussed when
the rotor and stator teeth are exactly facing each
other. Magnetic field distribution in the slots
is given and the average length of the magnetic
path is determined. The expression for the co-
efficient k_σ of the lateral dissipation is found
in the form:

Card 5/11

$$k_t = \frac{\tilde{\iota}_0 \ln\left(1 + \frac{3a}{a_0}\right)}{\pi a} . \qquad (12)$$
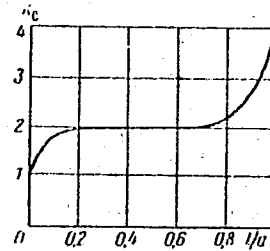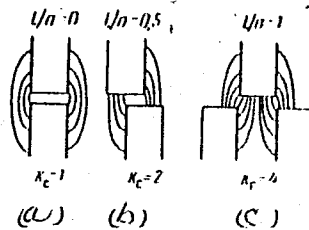
Determination of Magnetic Permeance in
Systems With Toothed Rotor and Stator

77483
SOV/103-21-1-14/22

The change in the coefficient k_σ as a function of
the shift between the rotor and stator teeth is dis-
cussed.

(a)   (b)   (c)

Card 6/11

Let the coefficient k_c account for the shift between
the rotor and stator teeth as shown on Figs. 3 and 4.
Thus the fictitious air-gap is now given in the form:

Determina... ... ... in
S... ... Wi... ... ...

77483
SOV/103-21-1-14/22

$$\delta' = \frac{\delta_0}{0.5\left(1 - \frac{l}{a}\right) + k_c k_0}. \tag{13}$$

Further precise expression of the fictitious
air gap. Equation 13 gives erroneous results for
short slots because of the influence of leakage fluxes
passing through the ends and edges of the teeth. In
a similar manner coefficient of the magnetic permeance
for the tooth ends is obtained in the form:

$$l_i = \frac{\delta_0 \ln\left(1 + 3.5 \frac{a}{\delta_0}\right)}{3.5a} \cdot \frac{a}{b} \cdot \frac{\delta_0 \ln\left(1 + 3.5 \frac{b}{\delta_0}\right)}{3.5b}, \tag{16}$$

where t is length of slots. When the rotor and

Card 7/11

Determination of Magnetic Permeance in   77483
Systems With Toothed Rotor and Stator   SOV/103-21-1-14/22

stator teeth face each other exactly, coefficient
of the magnetic permeance for the teeth edges equals
0.6 of k_m. Thus the following resultant equation is
obtained:

$$\lambda = \frac{\lambda_0}{\left(1-\frac{t}{\sigma}\right)(\lambda_\sigma + k_\tau) + 0.6k_\tau\left(1+\frac{t}{\sigma}\right) + k_\sigma k_n} \qquad (17)$$

where k_σ and k_T are defined by Eqs. (12) and (16),
respectively. Considering the magnetic reluctance
of the magnetic circuit. In systems with small
air-gaps the permeance of the magnetic circuit must
be accounted for. The magnetic flux Φ in the
magnetic circuit is determined by a graphic method.

Card 11

Determination of Magnetic Permeance in
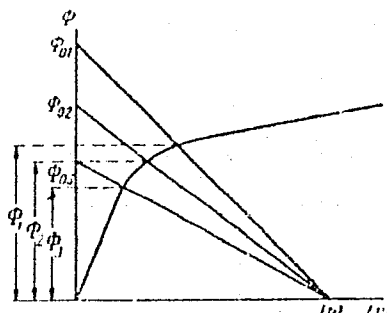Systems With Toothed Rotor and Stator

77483
SOV/103-21-1-14/22

Fig. 5.

On Fig. 5 is shown the magnetization curve of the
magnetic circuit. Magnetic flux in the air-gap is
determined by following equation:

$$\Phi_0 = \frac{iw}{\delta}\,\mu_0 S,$$

(18)

Card 9/11

Determination of Magnetic Permeance in
Systems With Toothed Rotor and Stator

77483
SOV/103-21-1-14/22

where S is area of the air-gap and iw are ampere
turns. (Here it is assumed that the magnetic
reluctance of the magnetic circuit equals zero).
The flux in the air-gap represents a linear function
of the ampere turns. This straight line characteristic
passes the points with coordinates iw, 0 and 0, Φ_0

(see Fig. 5). The point of intersection of the
magnetization curve and of the straight line deter-
mines the magnetic flux Φ corresponding to the
ampere turns iw. The results obtained may be used
for calculation of all electromagnetic devices. The
magnetic permeability and its variations as function
of the shift between the rotor and stator teeth may
be represented by magnitudes of forces, moments, or
inductances, depending on the kind of the calculated
device. The assistance of L. K. Shrago is acknowledged.
There are 5 figures; and 7 references, 6 Soviet, 1
U.S. The U.S. reference is: Goldberg, E., Stabili-
Card 10/11   zation of Wide-Band Direct-Current Amplifier for

Determination of Magnetic Permeance in   77483
Systems With Toothed Rotor and Stator   SOV/103-21-1-14/22

          Zero and Gain, RCA Review, Vol XI, Nr 2, 1950.

SUBMITTED: May 29, 1959

Card 11/11

SVIRIDENKO, Sergey Kharitonovich; BARAB-TARLE, Matus' Yelevich;
        MIZHEVSKIY, Lev Leonidovich; RASHKOVICH, Mikhail Pavlovich;
        SKRIBNER, Leonid Andreyevich; SHRAGO, Leonid Konstantinovich;
        ORLIKOV, M.L., kand. tekhn. nauk, retsenzent; ROMANOV, A.I.,
        inzh., red.; BYKOVSKIY, A.I., inzh., red.; GORNOSTAYPOL'SKAYA,
        M.S., tekhn. red.

        [Program control of jig drilling machines]Programmnoe upravle-
        nie koordinatno-sverlil'nymi stankami. Moskva, Mashgiz, 1962.
        87 p.   (MIRA 15:9)
          (Drilling and boring machinery—Numerical control)

SRIBNER, Leonid Andreyevich; SHRAGO, Leonid Konstantinovich; SPYNU, G.A.,
kand. tekhn. nauk, retsenzent; BYKOVSKIY, A.I., inzh., red.;
GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Design of position-type program control systems] Proektirovanie
pozitsionnykh sistem programmnogo upravleniia. Moskva, Mashgiz,
1962. 307 p.   (MIRA 15:5)
          (Automatic control)
          (Milling machines—Numerical control)

SRIBNER, L.A.; SHRAGO, L.K.

Investigating new coincidence circuits with contact position
transducers. Avtom.i prib. no.3:42-44 Jl-S '62. (MIRA 16:2)

1. Spetsial'noye konstruktorskoye byuro No.3 Odesskogo
soveta narodnogo khozyaystva.
                    (Electric circuits)